

REMARKS

Favorable reconsideration of this application is respectfully requested in view of the previous amendments following remarks.

The amendments to the title and claims address the issues raised in sections "2" through "5" of the Official Action. Withdrawal of the objections to the title and claims is therefore respectfully requested.

Claim 1, the only independent claim, is rejected as being unpatentable over International Application Publication No. WO01/82410. As that document was published in Spanish, the remainder of this response will refer to the corresponding U.S. Patent No. 6,809,692, hereinafter *Puente Baliarda*.

Claim 1 recites an antenna pane including at least one glass pane and at least one electrically conductive coating which is subdivided by barrier lines into a number of electrically isolated segments. On the antenna pane, the coating incorporates at least one strip-like segmented surface portion in which the distance between the barrier lines is so small that the coating there can transmit HF radiation in a specified frequency range. Also, the segmented surface portion is, by contacting in contact areas at its two longitudinal sides and by its outer dimensions, constructed as a slot antenna for electromagnetic radiation in the range of frequencies which the segmented surface portion can transmit.

Puente Baliarda's Fig. 5 embodiment relied upon by the Official Action is a multilevel antenna defined by the perimeter of polygonal elements. That embodiment is discussed in detail below. However, for ease of understanding, a discussion of the embodiments illustrated in Figs. 2 and 3 precedes the discussion of the embodiment of Fig. 5.

With respect to the Fig. 3 embodiment, the antenna's triangular elements are defined by the transparent conducting layer 4 only at their external perimeters, as illustrated in Fig. 3. Moreover, as discussed in lines 37-41 of column 6 of Puente Baliarda, the behavior of the antenna illustrated in Fig. 3 is similar to that of the antenna illustrated in Fig. 2 whereby the current distribution is mainly concentrated in the external perimeter of the triangular elements due to reduced ohmic contact between the elements.

Turning now to the antenna illustrated in Fig. 2, the antenna is composed of a set of triangular elements scaled by a factor of $\frac{1}{2}$. As discussed in the paragraph bridging columns 5 and 6 of Puente Baliarda, seven triangle scales are used, and the antenna features a similar behavior at seven different frequency bands, each one being approximately twice higher than the previous one. As also discussed in that portion of Puente Baliarda, the lower frequency is related to the outer triangle-like perimeter dimensions, approximately a quarter-wavelength at the edge of the triangle. Accordingly, it would have been clear to an ordinarily skilled artisan that each triangular element is an antenna for the reception of one particular frequency band. Furthermore, because the triangular elements are scaled by $\frac{1}{2}$, the frequency band received by each smaller triangular element will be approximately twice higher than the previous one.

Turning back to the antenna illustrated in Fig. 3, it would have been clear to an ordinarily skilled artisan that that antenna will also have reception in seven frequency bands, with each triangular element receiving one frequency band. Indeed, as discussed above, the behavior of that antenna is disclosed by Puente Baliarda as similar to that of the antenna illustrated in Fig. 2.

With respect to the antenna illustrated in Fig. 5, Applicants respectfully submit that an ordinarily skilled artisan would have understood that an analogue of a dipole antenna is known as a conventional slot antenna. Essentially, a metallic rod (a dipole antenna) in free space may be replaced by a "free space" in a conductor, the free space having the same configuration as the dipole antenna. Applicants further submit that it would have been clear to an ordinarily skilled artisan that Puente Baliarda refers to the antenna illustrated in Fig. 5 as a slot antenna because that antenna uses the above-discussed principle. Indeed, Fig. 5 is simply the complementary configuration of Fig. 3.

As such, an ordinarily skilled artisan would have understood that the antenna illustrated in Fig. 5 receives seven frequency bands, one for each triangular element. Considering the outer perimeter of this antenna, an ordinarily skilled artisan would have understood this outer triangular element to receive the lowest frequency band. The outer perimeter is therefore a slot antenna for the lowest frequency band. However, the slot antenna formed from the outer perimeter is merely the complementary configuration of the outer wire perimeter of Fig. 3, as discussed above. Therefore, the slot antenna for the lowest frequency band is that part of the pane that is free of coating, as was known in conventional slot antennae.

By contrast, in the recited antenna, it is a segmented strip-like portion of a coating, not a portion of a pane that is free of coating, that acts as a slot antenna. Moreover, in the recited antenna, the distance between barrier lines is so small that the coating there can transmit HF radiation in a specified frequency range. Again, in the embodiment illustrated in Fig. 5 of Puente Baliarda, it is the portion of the pane free of coating that acts as a conventional slot antenna and transmits radiation.

Additionally, in the recited antenna, the segmented surface portion of the coating is contacted in contact areas at its two longitudinal sides. By contrast, in the antenna illustrated in Fig. 5 of Puente Baliarda, one line connects to the lower triangular element, while the other line simply connects to the outer conductive layer, as discussed in the paragraph bridging columns 6 and 7 and as illustrated in Fig. 5. Thus, the Puente Baliarda antenna does not include a segmented surface portion of a coating contacted in contact areas at two longitudinal sides.

For the above reasons, Claim 1 is allowable over Puente Baliarda, and withdrawal of the rejection of Claim 1 is respectfully requested.

The dependent claims are allowable at least by virtue of their dependence from allowable independent Claim 1. Thus, a detailed discussion of the additional distinguishing features recited in the dependent claims is not set forth at this time.

Early and favorable action with respect to this application is respectfully requested.

Should any questions arise in connection with this application or should the Examiner believe that a telephone conference with the undersigned would be helpful

in resolving any remaining issues pertaining to this application the undersigned respectfully requests that he be contacted at the number indicated below.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY PC

Date: June 8, 2009

By: Peter T. deVore
Matthew L. Schneider
Registration No. 32814

Peter T. deVore
Registration No. 60361

P.O. Box 1404
Alexandria, VA 22313-1404
703 836 6620